

## SHARING INFORMATION ABOUT PURCHASES

## TECHNICAL FIELD

The present invention is directed to the field of shopping information systems.

## BACKGROUND

5           The World Wide Web ("the Web") is a system for publishing information, in which users may use a Web browser application to retrieve information, such as Web pages, from Web servers and display it. Search engines, subject indices, and links between Web pages and Web sites facilitate the exploration of information published on the Web.

10           The Web has increasingly become a medium used to shop for products. Indeed, thousands and thousands of different products may be purchased on the Web. A user who plans to purchase a product on the Web can visit the Web site of a Web merchant that sells the product, view information about the product, give an instruction to purchase the product, and provide information needed to complete the purchase, such as payment and shipping information.

15           Like other types of merchants, Web merchants generate revenue and profits by selling products to customers. Thus, aspects of a Web merchant's Web site that directly facilitate the sale of products contribute to the Web merchant's level of profitability. For instance, the one-click purchase system developed by Amazon.com, by making it easier for customers to complete their purchase of products, contributes to the level of profitability of  
20   Web merchants employing this system.

          In addition to aspects of a Web merchant's Web site that directly facilitate the sale of products, other aspects of a Web merchant's Web site may also contribute to the Web merchant's level of profitability. Principal among these other aspects of a Web merchant's Web site are aspects that motivate more customers and potential customers (hereafter  
25   "users") to visit the Web merchant's Web site more often, and to "remain" there, viewing

content, for longer periods of time. The extent to which a Web site motivates users in this way is sometimes referred to as the Web site's level of "stickiness."

A Web merchant that has a particularly sticky Web site is often able to improve profitability in a number of ways. First, because more users visit the Web site more frequently and remain longer, the Web merchant has more opportunities to sell products to users, and ultimately sells more products to users. Second, if the Web merchant elects to display advertisements on its Web site, the level of revenue realized from such advertising increases as traffic on the Web merchant's Web site increases. Third, if the Web merchant elects to enter into referral or traffic sharing agreements with other Web sites, a high level of traffic on the Web merchant's Web site can increase the revenue derived from these agreements, or at least reduce the cost of these agreements. Fourth, to the extent that the Web site can encourage users to contribute content to the Web site, such user-contributed contents can make the Web site still stickier, reinforcing the other ways in which stickiness contributes to profitability. Thus, any aspects of a Web merchant's Web site that increase the stickiness of the Web page can improve profitability for the Web merchant.

One reason attributed to the somewhat low rate at which users have accepted shopping on the Web is that, while shopping on the Web usually satisfies the utilitarian purpose that most people have for shopping at physical stores, shopping on the Web generally falls short of fulfilling the "entertainment" or "shared activity" purposes that many people also have for shopping at physical stores. Accordingly, a new feature of a Web merchant Web site that helped to fulfill these "entertainment" and "shared activity" purposes of shopping, particularly one that increased the level of stickiness of the Web site, would have significant utility.

## BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a high-level block diagram showing the environment in which the facility typically operates.

Figure 2 is a display diagram showing a first portion of a shared purchases Web page for a sharing user whose nickname is "jj."

Figure 3 is a display diagram showing a subsequent portion of the shared purchases Web page shown in Figure 2.

Figure 4 is a display diagram showing a “Friends and Favorites” Web page for a user other than jj.

Figure 5 is a display diagram showing a product description Web page.

Figure 6 is a display diagram showing a display produced in response to an order by the user Steve for a product.

Figure 7 is a display diagram showing a display usable by a user to share and offer feedback on past purchases.

Figure 8 is a display diagram showing a display showing a page for a user “Ryan” referencing the friends best sellers list for the user Ryan.

Figure 9 is a display diagram showing the contents of the friends best sellers list for the user Ryan.

## DETAILED DESCRIPTION

A purchase sharing software facility enables users, referred to as “sharing users,” to selectively share information about their purchases with other users. At various points, the facility enables a sharing user to select for sharing products that the sharing user has purchased. For example, the sharing user may select a product for sharing at the time the product is purchased, or at a later time.

The user may optionally select or define a group of users with which information about the selected purchase will be shared. The user may also choose to share information about the selected purchase with all users, or to share different amounts of information about the selected purchase with different groups of users, or to share information about different groups of users in different contexts.

The sharing user may also optionally add information to the information that is shared for a particular shared purchase. For example, the sharing user may add a rating of the purchased product, or a review or other discussion of the product.

After a sharing user has selected a purchase for sharing, information about the purchase is provided to any users that are in the group or groups of users designated by the sharing user to receive it. For example, when a user in this group visits a web page containing a description of the purchased product, the facility may display a visual indication that the sharing user purchased the product. The indication may either be accompanied by

additional details about the sharing user's purchase of the product, or may include a link to additional details. Additional details may include the date on which the sharing user purchased the product and the sharing user's feedback on the product. Information about the shared purchase may also be provided to users in the designated group when they visit a page containing information about the sharing user, or may be transmitted to those users in messages of various types. In addition to the additional details mentioned above, the information about the purchase displayed on this page may also include information about the product, including its name, a description, an image, and controls for purchasing the product or adding it to a wish list.

In some embodiments, the facility provides a "friends best sellers list" to users. The friends best sellers list identifies products purchased by one or more users that have a purchase information sharing relationship with the current user. In certain embodiments, the friends best seller list is sorted in decreasing order of the number of other users having the purchase information sharing relationship that purchased each product.

By facilitating the sharing of purchase information in this manner, the facility adds to the online shopping model a sense of "entertainment" or "shared activity" typically missing from online shopping. In the process, it both directly facilitates the sale of products, and indirectly contributes to the Web merchant's level of profitability by significantly increasing the stickiness level of the Web merchant Web site.

Figure 1 is a high-level block diagram showing the environment in which the facility typically operates. The block diagram shows several client computer systems, such as client computer systems 110, 120, and 130. Each of the client computer systems has a Web client computer program for browsing the World Wide Web, such as Web clients 111, 121, and 131. The client computer systems are connected via the Internet 140 to a server computer system 150 hosting the facility. Those skilled in the art will recognize that client computer systems could be connected to the server computer system by networks other than the Internet, however.

The server computer system 150 contains a memory 160. The memory 160 preferably contains merchant software 161 incorporating both the facility 162 and purchase sharing data 163 preferably used by the facility.

The memory preferably further contains a Web server computer program 164 for delivering Web pages in response to requests from Web clients. While items 161-164 are

preferably stored in memory while being used, those skilled in the art will appreciate that these items, or portions of them, maybe be transferred between memory and a persistent storage device 172 for purposes of memory management and data integrity. The server computer system further contains one or more central processing units (CPU) 171 for  
5 executing programs, such as programs 161-164, and a computer-readable medium drive 173 for reading information or installing programs such as the facility from computer-readable media, such as a floppy disk, a CD-ROM, or a DVD.

While preferred embodiments are described in terms in the environment described above, those skilled in the art will appreciate that the facility may be implemented  
10 in a variety of other environments including a single, monolithic computer system, as well as various other combinations of computer systems or similar devices connected in various ways.

In order to more effectively describe the implementation and operation of the facility, it is hereafter discussed in the context of an example. Aspects of the example are  
15 shown in Figures 2-7.

Figures 2-5 show examples of how the facility displays to a user information about purchases made by other users. Figure 2 is a display diagram showing a first portion of a shared purchases Web page for a sharing user whose nickname is "jj." This Web page lists some or all of the purchases made by the user jj that this user has elected to share.  
20 Display 200 which shows a first portion of this Web page contains information about two shared purchases 210 and 220. In each case, the information about the purchase includes the name of the purchased product, which is typically a link to another page containing more extensive information about the product, as is product name 211. The information about a product may also include such information as a picture of the product, the type of the  
25 product, the name of the product, the manufacturer of the product, the price of the product, a description of the product, purchase terms of the product, an artist who created the product, purchase terms for the product, as well as information of a variety of other types. The information about a purchased product may contain various other controls, such as an add to cart button like button 212 for adding the product to a shopping cart, or an add to wish list  
30 button for adding the product to a wish list like button 213. Various other controls may also be included, such as a one-click purchase button (not shown) for immediately purchasing the product without further interaction.

Figure 3 is a display diagram showing a subsequent portion of the shared purchases Web page shown in Figure 2. The display 300 shows additional products purchased and shared by the user jj. The display shows information about three additional products 310, 320, and 330. Information about product 320 includes feedback from the user jj, including a rating 324 in a star rating system assigned by the user jj, and a description 325 authorized by the user jj. This information is generally generated by the purchasing user to assist those users who review the shared purchase in determining whether they are interested in purchasing the purchased product. This feedback on the product is different from the other kinds of information about a product that the merchant can provide, in that (a) it is clearly from the identified user, as opposed to a professional marketer, and (b) it reflects the individual style of the user that prepares it. These factors make it more likely in many cases that this form of user feedback will be given greater weight by other purchasers and lead to additional sales that otherwise would not have been produced by displaying other information about the product. In addition, acquaintances of the purchasing user may read this feedback from the purchasing user as a sort of communication from the purchasing user. Other users not acquainted with the purchasing user may read this feedback as a sort of literature. In both cases, these ways of regarding feedback from the purchasing user contribute to the stickiness of the merchant Web site.

Figure 4 is a display diagram showing a "Friends and Favorites" Web page for a user other than jj. This user, "Steve," has a purchase information sharing relationship with the user jj. In the parlance of the display 400, jj is a favorite person and trusted friend of the user Steve. Accordingly, the Friends and Favorites Web page for the user Steve contains an indication 410 that the user jj has recently performed additional activity that is shared with her trusted friends and favorite people. The indication includes a link 411 that can be traversed to the shared purchaser's Web page for the user jj shown in Figures 2 and 3. In this way, users who have a purchase information sharing relationship with the user jj can discover and read about the user jj's recent purchases and/or recently-shared purchases.

Figure 5 is a display diagram showing a product description Web page. Display 500, in addition to a variety of other types of information about the product and controls for purchasing the product, includes a display 510 of other users who have purchased the product. The display 510 contains an indication 511 that jj has purchased the product. The indication 511 is a link to the portion of the shared purchases Web page for the

user jj that contains information about this product. In alternative embodiments, the indication 511 could contain additional information, such as any of the information shown on the shared purchases Web page for the purchasing user. By displaying this information on product description Web pages throughout the merchant Web site, the facility is able to deliver shared purchase information even to users that aren't aware of the shared purchases feature, or who fail to specifically seek it out. In many senses, if a user is considering the purchase of the product described in a product description Web page, an indication that the user's friends, whose judgment the user trusts, have already purchased the item may be a significant factor in influencing the user to purchase the product. Further, such indications on product description Web pages can serve to introduce or reintroduce the user to the shared purchases feature. In this case, the user may go on to investigate other shared purchases of this sharing user or other users.

Shared purchase information may be conveyed in a variety of other ways, including displaying purchase information on various other Web pages, sending users various types of electronic messages, or sending a postal letter to users, for example.

Figures 6-7 show examples of how a purchasing user may share information about the purchase of a product. Figure 6 is a display diagram showing a display produced in response to an order by the user Steve for a product. The display 600 shows the name of the product, as well as a share button 602 that the user may click in order to designate the product for purchase sharing. As is discussed in more detail below, the display 600 may in some embodiments include additional controls for specifying a group of users with which to share information about the purchase, and for providing feedback (at least preliminary feedback) about the product as part of the shared information.

Figure 7 is a display diagram showing a display usable by a user to share and offer feedback on past purchases. The display 700 contains a row for each of a number of past purchases, such as rows 710, 720, 730, and 740. Any of these purchases may be shared with either all users, or users with whom this user has special purchase information sharing relationships. The user uses radio button 701 to select either all users or users with whom the user has purchase information sharing relationships ("trusted friends"). In alternative embodiments, the user may designate other groups with which to share purchase information, including groups earlier defined by the user, groups dynamically defined by the user, groups defined by someone other than the user, groups that other users themselves opt into, and

groups automatically generated, such as groups in which all of the users share some set of characteristics, including such characteristics as items purchased, shopping pattern, geographical location, or any other information collected from or about users.

To share a particular purchase, the user checks the checkbox for the purchase, and optionally may add feedback about the purchase. For example, to share information about the purchase of the Modern Information Retrieval book shown in row 710, the user checks checkbox 711, and may also type comments in comments field 713, and select one of the product rating radio buttons 714. If the user wishes to share all of the products in the list, the user may click share all button 750 rather than checking each of the checkboxes.

Instructions for sharing purchases may be issued in a variety of other ways. For example, in some embodiments, a user may set a persistent “always share” flag in order to share information about each purchase as purchases are made. In one embodiment, this flag may be toggled on and off by the user in order to set the default behavior for automatically sharing each purchase as it is made. In another embodiment, such a flag may be permanently set for “celebrity shoppers” with whom the merchant reaches an agreement to shop at the merchant and share information about their purchases with other users.

Also, embodiments of the facility support sharing information about purchases made from other merchants, as well as purchases made by people other than the sharing user. For example, the facility preferably enables a user, when viewing information about a particular product, to indicate that the user already owns the product. When the user indicates that he or she already owns the product, the facility preferably prompts the user to indicate whether the user’s purchase of the product should be shared with other users. Additional embodiments of the invention enable a user to share information about a product purchased on that user’s behalf by someone else. For example, where a first user purchases a product as a gift for a second user, the second user may determine whether information about that purchase should be shared with other users. The second user may make this determination by any of the mechanisms described above. Alternatively, the facility may send the second user an email message indicating that the item has been purchased for the second user in soliciting a determination by return email of whether information about the purchase should be shared with other users. In some cases, such as where the “always share” flag is set for the second user, or where the product was purchased by the first user from a



publicly-viewable wish list generated by the second user, such purchases are automatically shared with other users.

Figure 8 is a display diagram showing a display showing a page for a user “Ryan” referencing the friends best sellers list for the user Ryan. The display 800 includes information 801 about this friends best sellers list for the user Ryan. The information includes a link 802 to the friends best sellers list for the user Ryan.

Figure 9 is a display diagram showing the contents of the friends best sellers list for the user Ryan. The display 900 includes friends best sellers list 901. The friends best sellers list includes information about each of a number of products purchased by other users with which the user Ryan has a purchase information sharing relationship. For example, information 910 relates to a “The Matrix DVD” product purchased by users with whom the user Ryan has a purchase information sharing relationship. Among this information is a count 911 of the number of such users that have purchased this product. The list 901 preferably sorted in the descending order of this count.

It will be understood by those skilled in the art that the above-described facility could be adapted or extended in various ways. For example, the facility may be implemented and/or operated by parties other than a Web merchant. The facility may also display information about purchases made from a variety of different Web merchants, and from merchants other than Web merchants. A facility may utilize a wide variety of different ways to authorize the sharing of purchase information, to define and select groups of users with whom different types and quantities of purchase information is shared, and to actually share purchase information. While the foregoing description makes reference to preferred embodiments, the scope of the invention is defined solely by the claims that follow and the elements recited therein.